JRCPTB
Joint Royal Colleges of Physicians Training Board

Curriculum for Renal Medicine Training
Implementation August 2022

ROYAL COLLEGE
of PHYSICIANS
of EDINBURGH

ROYAL COLLEGE OF
PHYSICIANS AND
SURGEONS OF GLASGOW

Royal College
of Physicians

Contents

1. Introduction

Training in Renal Medicine will take trainees who have completed Internal Medicine stage 1 (or equivalent) to the level at which they have the capabilities required to acquire a certificate of completion of training (CCT) and recommendation to the GMC for inclusion on the specialist register. Renal CCT holders will be regarded as capable of independent unsupervised practice in the field of renal medicine and will be eligible for appointment as an NHS consultant. All trainees will undertake Renal Medicine training alongside training in Stage 2 of Internal Medicine and will receive a CCT in both specialties.

This curriculum defines the purpose, content of learning, process of training and the programme of assessment for the Renal Medicine training.

2. Purpose

2.1 Purpose of the curriculum

The purpose of the Renal Medicine curriculum is to produce doctors with the specialty specific capabilities needed to assess and manage patients with a broad spectrum of both acute and chronic renal disease in a wide range of environments including dialysis units, hospital and community based outpatient clinics, renal and general medical wards and acute medical and surgical admission units. It is recognised that renal medicine has a key role in the delivery of acute and emergency medicine and the renal curriculum will reflect this. It is also recognised that renal medicine has a key role in the management of the aging population in a primary care setting and the renal curriculum will reflect this as well.

All trainees will be trained to support internal medicine, acute medicine and other medical specialties in the management of an increasingly complex and co-morbid patient population many of whom have renal disease. Patients with chronic renal disease (CKD) and end-stage renal disease (ESRD) rarely have renal disease in isolation and the co-morbidity burden in this group of patients is high. The renal curriculum will continue to encourage a holistic approach to the care of such patients which will include aspects of internal medicine and enhanced integration with other relevant medical specialties and with primary care.

Renal physicians in training will learn using a range of methods, including workplace based experiential learning, local departmental teaching, formal regional postgraduate teaching and simulation based education. Training will be delivered by a range of local education providers within regions which will include secondary and tertiary referral centres. All trainees will gain exposure to, and competency in, specialised renal services including renal transplantation and speciality renal services. Trainees will be expected to participate in audit and a quality improvement project and encouraged to participate in research and innovation.

The renal curriculum has been developed by consultant nephrologists who are members of the Renal SAC in consultation with senior renal physicians, with renal trainees, and with lay persons and service providers. The UK Kidney Association has provided representation for

the wider UK renal community including consultants, training and non-training grade doctors as well as renal academics.

Population and service need

The Shape of Training (SoT) review was a catalyst for reform of postgraduate training of all doctors to ensure it is more patient focused, more general (especially in the early years) and with more flexibility of career structure. For physician training, the views and recommendations of SoT were similar to those of the Future Hospital Commission and the Francis report. With an ageing population, elderly patients exhibit co-morbidities and increasing complexity so acute medical and palliative medicine services need a revised approach to training the physician of the future in order to meet these needs.

A further driver for change was the GMC review of the curricula and assessment standards and introduction of the GPC framework. From May 2017, all postgraduate curricula should be based on higher level learning outcomes and must incorporate the generic professional capabilities. A fundamental component of the GPCs is ensuring that the patient is at the centre of any consultation and decision making.

The JRCPTB, on behalf of the Federation of Royal Colleges of Physicians, developed a model that consists of dual training period leading to CCTs in a specialty plus internal medicine. There will be competitive entry following completion of stage 1 Internal Medicine Training (IMT) or Acute Care Common Stem – Internal Medicine (ACCS-IM), during which there will be increasing responsibility for the acute medical take and the MRCP(UK) Diploma will be achieved.

Renal disorders represent a significant and growing healthcare burden in the UK. Renal diseases include rare immunological, metabolic and genetic conditions as well as common conditions related to cardiovascular disease, diabetes, hypertension and aging. Advanced kidney disease and end-stage renal failure (ESRD) are uncommon but require significant healthcare resources for their management and acute kidney injury is a significant challenge for all acute medical and surgical services.

Scope of practice
Trainees gaining a CCT in renal medicine will be expected to be competent in the management of chronic kidney disease, end-stage renal disease, in the management of acute kidney injury and in the delivery of specialised renal services. Trainees will be capable of working in a complex multidisciplinary environment and will be trained to providing support to acute medical and surgical specialities as well as to primary care in the management of patients with kidney disease.

Renal trainees will have training across all IM capabilities in practice (CiPs) and, as such, will have flexibility to work within acute internal medicine teams. Renal trainees will also be trained to deliver speciality specific emergency medicine including the diagnosis and management of acute kidney injury and the provision of emergency dialysis.

Renal physicians will have a wide variety of opportunities to participate in research and renal training is designed to facilitate opportunities for academic activity including periods 'out of programme' for research.

This purpose statement has been endorsed by the GMC's Curriculum Oversight Group and confirmed as meeting the needs of the health services of the countries of the UK.

2.2 High level learning outcomes – capabilities in practice (CiPs)

The renal medicine capabilities in practice (CiPs) describe the professional tasks or work within the scope of renal medicine. Six renal medicine CiPs describe the essential tasks which must be entrusted to all renal physicians. These are in addition to the six generic CiPs and eight Internal Medicine clinical CiPs.

Each CiP has a set of descriptors associated with that activity or task. Descriptors are intended to help trainees and trainers recognise the minimum level of knowledge, skills and behaviours which should be demonstrated for an entrustment decision to be made. By the completion of training and award of a CCT, the doctor must demonstrate that they are capable of unsupervised practice in all 6 specialty CiPs. The renal medicine CiPs describe the clinical tasks or activities which are essential to the practice of the specialty. They have been mapped to the GPC domains and subsections to reflect the professional generic capabilities required to undertake the clinical tasks. Satisfactory sign off requires demonstration that, for each of the CiPs, the trainee's performance meets or exceeds the minimum expected level for completion of training, as defined in the curriculum.

Learning outcomes – capabilities in practice (CiPs)
Generic CiPs
1. Able to successfully function within NHS organisational and management systems
2. Able to deal with ethical and legal issues related to clinical practice
3. Communicates effectively and is able to share decision making, while maintaining appropriate situational awareness, professional behaviour and professional judgement
4. Is focused on patient safety and delivers effective quality improvement in patient care
5. Carrying out research and managing data appropriately
6. Acting as a clinical teacher and clinical supervisor
Clinical CiPs (Internal Medicine)
1. Managing an acute unselected take
2. Managing the acute care of patients within a medical specialty service
3. Providing continuity of care to medical inpatients, including management of comorbidities and cognitive impairment
4. Managing patients in an outpatient clinic, ambulatory or community setting, including management of long term conditions

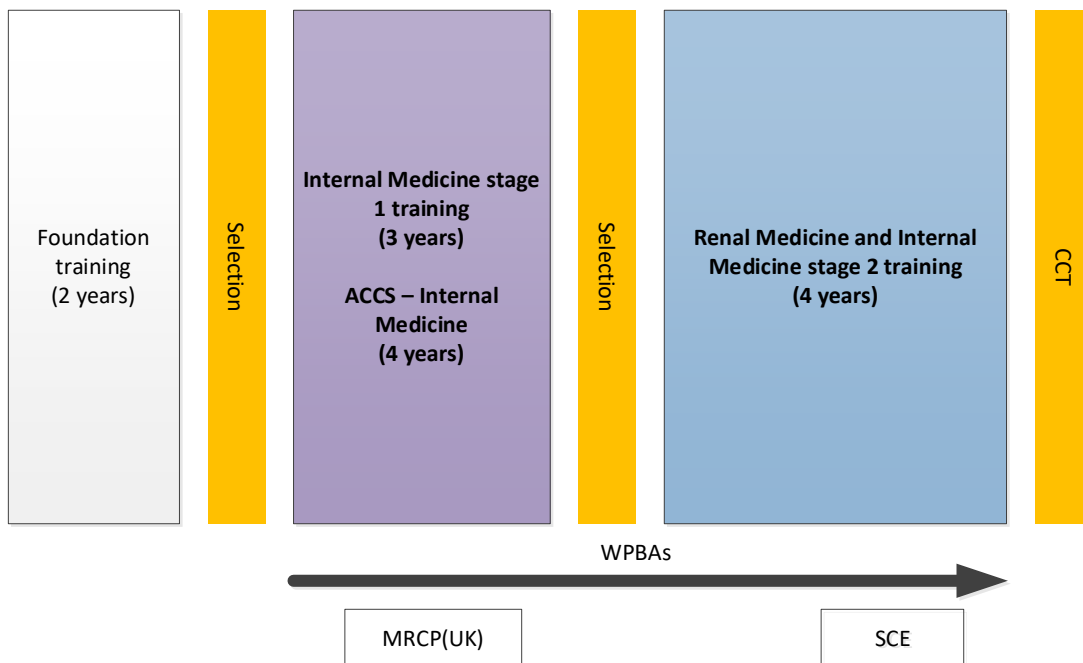| |
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| 5. Managing medical problems in patients in other specialties and special cases |
| 6. Managing a multidisciplinary team including effective discharge planning |
| 7. Delivering effective resuscitation and managing the acutely deteriorating patient |
| 8. Managing end of life and applying palliative care skills |
| **Specialty CiPs** |
| 1. Running a renal ward |
| 2. Managing a haemodialysis and peritoneal dialysis programme |
| 3. Running an acute renal referral service |
| 4. Managing patients with chronic kidney disease stage I – IV |
| 5. Understanding of a subspecialty clinical service |
| 6. Managing renal transplant patients |

Output

At the end of training, the trainee should be able to:
- Deliver care in a complex multidisciplinary healthcare environment.
- Respond flexibly to changing service needs.
- Demonstrate all the GMC mandated GPCs including communication skills.
- Demonstrate the attributes of professionalism, particularly recognition of the primacy of patient welfare that is required for safe and effective care of those with both acute and long-term conditions, ensuring patients' views are central to all decision making.
- Participate fully in the acute medical take.
- Manage patients with end-stage renal failure.
- Work with primary care in the identification and management of chronic kidney disease.
- Work with acute medical and surgical services in the identification and management of acute kidney injury.
- Deliver renal speciality services.
- Continue personal professional development and to help train and educate not only doctors and medical students, but students and qualified staff from the full range of related professions.
- Contribute to service quality control and quality improvement activities both within their employing NHS organisation and also more broadly linking in with local statutory and non- statutory organisations. They should also be able to facilitate research and, in some cases, be able to contribute and lead it.

2.3 Training pathway

Renal Medicine is a group 1 specialty and will comprise an indicative three years of IM Stage 1 training or four years of Acute Care Common Stem – Internal Medicine (ACCS-IM) followed by an indicative four years of specialty training incorporating IM Stage 2 training.

| Foundation training (2 years) | Selection | Internal Medicine stage 1 training (3 years) ACCS – Internal Medicine (4 years) | Selection | Renal Medicine and Internal Medicine stage 2 training (4 years) | CCT |

WPBAs

MRCP(UK)   SCE

2.4 Duration of training

Training in Renal Medicine and Internal Medicine stage 2 will usually be completed in four years of full time higher specialist training. There will be options for those trainees who demonstrate exceptionally rapid development and acquisition of capabilities to complete training more rapidly than the current indicative time although it is recognised that clinical experience is a fundamental aspect of development as a good physician (guidance on completing training early will be available on the JRCPTB website). There may also be a small number of trainees who develop more slowly and will require an extension of training in line the Reference Guide for Postgraduate Specialty Training in the UK (The Gold Guide).

2.5 Triple CCT with Intensive Care Medicine

Prior to the introduction of the new 2021 ICM curriculum, trainees in Respiratory, Renal and Acute Internal Medicine could also apply to train in ICM and achieve a dual CCT. These groups of consultants provide an essential part of a modern Critical Care Service. The new curricula for group 1 medical specialties now compulsorily incorporates training in Internal Medicine (IM), resulting in dual CCTs. Addition of ICM therefore results in a triple CCT. This new development adds extra content to the programme for physicians wishing to train in ICM, but also produces consultants with broad skills ideally suited to the changing demands of an evolving, modern Critical Care Service.

The addition of the CCT in ICM requires careful communication between the Training Programme Directors to plan for a rotation that is effective, and outcome focused. Cross-mapping exercises have shown a considerable overlap between the specialties, which allows the learning outcomes for the respective curricula to be achieved as efficiently as possible. However, there are capabilities which can only be achieved within a specific attachment. Consideration should be given to combining assessments and reviews wherever possible.

The specialties encompassed in this mapping are:

• Internal Medicine and Acute Internal Medicine
• Internal Medicine and Renal Medicine
• Internal Medicine and Respiratory Medicine

The indicative timeframe for each of the triple CCT programmes is 8.5-9.5 years

2.6 Flexibility and accreditation of transferrable capabilities

The curriculum incorporates and emphasises the importance of the generic professional capabilities (GPCs). GPCs will promote flexibility in postgraduate training as these common capabilities can be transferred from specialty to specialty. In addition, the generic CiPs will be shared across all physicianly curricula and the IM clinical CiPs will be shared across all group 1 specialities, supporting flexibility for trainees to move between these specialties without needing to repeat aspects of training. The curriculum supports the accreditation of transferrable competencies (using the Academy framework).

Trainees will be able to train in academic medicine alongside their acquisition of clinical and generic capabilities, and these skills will be transferable across other specialties.

2.7 Less than full time training

Trainees are entitled to opt for less than full time training programmes. Less than full time trainees should undertake a pro rata share of the out-of-hours duties (including on-call and other out-of-hours commitments) required of their full-time colleagues in the same programme and at the equivalent stage. Less than full time trainees should assume that their clinical training will be of a duration pro-rata with the time indicated/recommended, but this should be reviewed in accordance with the Gold Guide.

2.8 Generic Professional Capabilities and Good Medical Practice

The GMC has developed the Generic professional capabilities (GPC) framework with the Academy of Medical Royal Colleges (AoMRC) to describe the fundamental, career-long, generic capabilities required of every doctor. The framework describes the requirement to develop and maintain key professional values and behaviours, knowledge, and skills, using a common language. GPCs also represent a system-wide, regulatory response to the most common contemporary concerns about patient safety and fitness to practise within the medical profession. The framework will be relevant at all stages of medical education, training and practice.

The nine domains of the GMC's Generic Professional Capabilities

Good medical practice (GMP)[1] is embedded at the heart of the GPC framework. In describing the principles, duties and responsibilities of doctors the GPC framework articulates GMP as a series of achievable educational outcomes to enable curriculum design and assessment.

The GPC framework describes nine domains with associated descriptor outlining the 'minimum common regulatory requirement' of performance and professional behaviour for those completing a CCT or its equivalent. These attributes are common, minimum and generic standards expected of all medical practitioners achieving a CCT or its equivalent.

The nine domains and subsections of the GPC framework are directly identifiable in the IM curriculum. They are mapped to each of the generic and clinical CiPs, which are in turn mapped to the assessment blueprints. This is to emphasise those core professional capabilities that are essential to safe clinical practice and that they must be demonstrated at every stage of training as part of the holistic development of responsible professionals.

This approach will allow early detection of issues most likely to be associated with fitness to practise and to minimise the possibility that any deficit is identified during the final phases of training.

3. Content of Learning

The curriculum is spiral and topics and themes will be revisited to expand understanding and expertise. The level of entrustment for capabilities in practice (CiPs) will increase as an

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[1] Good Medical Practice

individual progresses from needing direct supervision to able to be entrusted to act unsupervised.

3.1 Capabilities in practice

CiPs describe the professional tasks or work within the scope of the specialty and internal medicine. CiPs are based on the concept of entrustable professional activities[2] which use the professional judgement of appropriately trained, expert assessors as a defensible way of forming global judgements of professional performance.

Each CiP has a set of descriptors associated with that activity or task. Descriptors are intended to help trainees and trainers recognise the knowledge, skills and attitudes which should be demonstrated. Doctors in training may use these capabilities to provide evidence of how their performance meets or exceeds the minimum expected level of performance for their year of training. The descriptors are not a comprehensive list and there are many more examples that would provide equally valid evidence of performance.

Many of the CiP descriptors refer to patient centred care and shared decision making. This is to emphasise the importance of patients being at the centre of decisions about their own treatment and care, by exploring care or treatment options and their risks and benefits and discussing choices available.

Additionally, the clinical CiPs repeatedly refer to the need to demonstrate professional behaviour with regard to patients, carers, colleagues and others. Good doctors work in partnership with patients and respect their rights to privacy and dignity. They treat each patient as an individual. They do their best to make sure all patients receive good care and treatment that will support them to live as well as possible, whatever their illness or disability. Appropriate professional behaviour should reflect the principles of GMP and the GPC framework.

In order to complete training and be recommended to the GMC for the award of CCT and entry to the specialist register, the doctor must demonstrate that they are capable of unsupervised practice in all generic, clinical and specialty CiPs. Once a trainee has achieved level 4 sign off for a CiP it will not be necessary to repeat assessment of that CiP if capability is maintained (in line with standard professional conduct).

This section of the curriculum details the six generic CiPs, eight clinical CiPs for internal medicine (stage 2) and six specialty CiPs for Renal Medicine. The expected levels of performance, mapping to relevant GPCs and the evidence that may be used to make an entrustment decision are given for each CiP. The list of evidence for each CiP is not prescriptive and other types of evidence may be equally valid for that CiP.

3.2 Generic capabilities in practice

The six generic CiPs cover the universal requirements of all specialties as described in GMP and the GPC framework. Assessment of the generic CiPs will be underpinned by the

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[2] Nuts and bolts of entrustable professional activities

descriptors for the nine GPC domains and evidenced against the performance and behaviour expected at that stage of training. Satisfactory sign off will indicate that there are no concerns. It will not be necessary to assign a level of supervision for these non-clinical CiPs.

In order to ensure consistency and transferability, the generic CiPs have been grouped under the GMP-aligned categories used in the Foundation Programme curriculum plus an additional category for wider professional practice:

- Professional behaviour and trust
- Communication, team-working and leadership
- Safety and quality
- Wider professional practice

For each generic CiP there is a set of descriptors of the observable skills and behaviours which would demonstrate that a trainee has met the minimum level expected. The descriptors are not a comprehensive list and there may be more examples that would provide equally valid evidence of performance.

KEY

ACAT	Acute care assessment tool	ALS	Advanced Life Support
CbD	Case-based discussion	DOPS	Direct observation of procedural skills
ESENeph	European Specialty Examination Nephrology	GCP	Good Clinical Practice
Mini-CEX	Mini-clinical evaluation exercise	MCR	Multiple consultant report
MSF	Multi source feedback	PS	Patient survey
QIPAT	Quality improvement project assessment tool	TO	Teaching observation

Generic capabilities in practice (CiPs)
Category 1: Professional behaviour and trust
1. Able to function successfully within NHS organisational and management systems
Descriptors   - Aware of and adheres to the GMC professional requirements   - Aware of public health issues including population health, social detriments of health and global health perspectives   - Demonstrates effective clinical leadership   - Demonstrates promotion of an open and transparent culture   - Keeps practice up to date through learning and teaching   - Demonstrates engagement in career planning   - Demonstrates capabilities in dealing with complexity and uncertainty

	• Aware of the role of and processes for operational structures within the NHS • Aware of the need to use resources wisely
GPCs	Domain 1: Professional values and behaviours Domain 3: Professional knowledge • professional requirements • national legislative requirements • the health service and healthcare systems in the four countries Domain 9: Capabilities in research and scholarship
Evidence to inform decision	MCR MSF Active role in governance structures Management course End of placement reports
2. Able to deal with ethical and legal issues related to clinical practice	
Descriptors	• Aware of national legislation and legal responsibilities, including safeguarding vulnerable groups • Behaves in accordance with ethical and legal requirements • Demonstrates ability to offer apology or explanation when appropriate • Demonstrates ability to lead the clinical team in ensuring that medical legal factors are considered openly and consistently
GPCs	Domain 3: Professional knowledge • professional requirements • national legislative requirements • the health service and healthcare systems in the four countries Domain 4: Capabilities in health promotion and illness prevention Domain 7: Capabilities in safeguarding vulnerable groups Domain 8: Capabilities in education and training Domain 9: Capabilities in research and scholarship
Evidence to inform decision	MCR MSF CbD DOPS Mini-CEX ALS certificate End of life care and capacity assessment End of placement reports
Category 2: Communication, teamworking and leadership	
3. Communicates effectively and is able to share decision making, while maintaining appropriate situational awareness, professional behaviour and professional judgement	
Descriptors	• Communicates clearly with patients and carers in a variety of settings • Communicates effectively with clinical and other professional colleagues

	• Identifies and manages barriers to communication (eg cognitive impairment, speech and hearing problems, capacity issues) • Demonstrates effective consultation skills including effective verbal and nonverbal interpersonal skills • Shares decision making by informing the patient, prioritising the patient's wishes, and respecting the patient's beliefs, concerns and expectations • Shares decision making with children and young people • Applies management and team working skills appropriately, including influencing, negotiating, re-assessing priorities and effectively managing complex, dynamic situations
GPCs	Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 5: Capabilities in leadership and teamworking
Evidence to inform decision	MCR MSF PS End of placement reports

Category 3: Safety and quality	

4. Is focused on patient safety and delivers effective quality improvement in patient care	
Descriptors	• Makes patient safety a priority in clinical practice • Raises and escalates concerns where there is an issue with patient safety or quality of care • Demonstrates commitment to learning from patient safety investigations and complaints • Shares good practice appropriately • Contributes to and delivers quality improvement • Understands basic Human Factors principles and practice at individual, team, organisational and system levels • Understands the importance of non-technical skills and crisis resource management • Recognises and works within limit of personal competence • Avoids organising unnecessary investigations or prescribing poorly evidenced treatments
GPCs	Domain 1: Professional values and behaviours Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty

	• clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 3: Professional knowledge • professional requirements • national legislative requirements • the health service and healthcare systems in the four countries Domain 4: Capabilities in health promotion and illness prevention Domain 5: Capabilities in leadership and teamworking Domain 6: Capabilities in patient safety and quality improvement • patient safety • quality improvement
Evidence to inform decision	MCR MSF QIPAT End of placement reports

Category 4: Wider professional practice

5. Carrying out research and managing data appropriately

Descriptors	• Manages clinical information/data appropriately • Understands principles of research and academic writing • Demonstrates ability to carry out critical appraisal of the literature • Understands the role of evidence in clinical practice and demonstrates shared decision making with patients • Demonstrates appropriate knowledge of research methods, including qualitative and quantitative approaches in scientific enquiry • Demonstrates appropriate knowledge of research principles and concepts and the translation of research into practice • Follows guidelines on ethical conduct in research and consent for research • Understands public health epidemiology and global health patterns • Recognises potential of applied informatics, genomics, stratified risk and personalised medicine and seeks advice for patient benefit when appropriate
GPCs	Domain 3: Professional knowledge • professional requirements • national legislative requirements • the health service and healthcare systems in the four countries Domain 7: Capabilities in safeguarding vulnerable groups Domain 9: Capabilities in research and scholarship
Evidence to inform decision	MCR MSF GCP certificate (if involved in clinical research) Evidence of literature search and critical appraisal of research Use of clinical guidelines

	Quality improvement and audit
	Evidence of research activity
	End of placement reports

6. Acting as a clinical teacher and clinical supervisor	
Descriptors	• Delivers effective teaching and training to medical students, junior doctors and other health care professionals
	• Delivers effective feedback with action plan
	• Able to supervise less experienced trainees in their clinical assessment and management of patients
	• Able to supervise less experienced trainees in carrying out appropriate practical procedures
	• Able to act as clinical supervisor to doctors in earlier stages of training
GPCs	Domain 1: Professional values and behaviours
	Domain 8: Capabilities in education and training
Evidence to inform decision	MCR
	MSF
	TO
	Relevant training course
	End of placement reports

3.3 Clinical capabilities in practice

The eight IM clinical CiPs describe the clinical tasks or activities which are essential to the practice of Internal Medicine. The clinical CiPs have been mapped to the nine GPC domains to reflect the professional generic capabilities required to undertake the clinical tasks.

Satisfactory sign off will require educational supervisors to make entrustment decisions on the level of supervision required for each CiP and if this is satisfactory for the stage of training, the trainee can progress. More detail is provided in the programme of assessment section of the curriculum.

Clinical CiPs – Internal Medicine	
1. Managing an acute unselected take	
Descriptors	• Demonstrates professional behaviour with regard to patients, carers, colleagues and others
	• Delivers patient centred care including shared decision making
	• Takes a relevant patient history including patient symptoms, concerns, priorities and preferences
	• Performs accurate clinical examinations
	• Shows appropriate clinical reasoning by analysing physical and psychological findings
	• Formulates an appropriate differential diagnosis

	• Formulates an appropriate diagnostic and management plan, taking into account patient preferences, and the urgency required • Explains clinical reasoning behind diagnostic and clinical management decisions to patients/carers/guardians and other colleagues • Appropriately selects, manages and interprets investigations • Recognises need to liaise with specialty services and refers where appropriate
GPCs	Domain 1: Professional values and behaviours Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 3: Professional knowledge • professional requirements • national legislation • the health service and healthcare systems in the four countries Domain 4: Capabilities in health promotion and illness prevention Domain 5: Capabilities in leadership and teamworking Domain 6: Capabilities in patient safety and quality improvement • patient safety • quality improvement
Evidence to inform decision	MCR MSF CbD ACAT Logbook of cases Simulation training with assessment
2. Managing the acute care of patients within a medical specialty service	
Descriptors	• Able to manage patients who have been referred acutely to a specialised medical service as opposed to the acute unselected take (eg cardiology and respiratory medicine acute admissions • Demonstrates professional behaviour with regard to patients, carers, colleagues and others • Delivers patient centred care including shared decision making • Takes a relevant patient history including patient symptoms, concerns, priorities and preferences • Performs accurate clinical examinations • Shows appropriate clinical reasoning by analysing physical and psychological findings • Formulates an appropriate differential diagnosis

	• Formulates an appropriate diagnostic and management plan, taking into account patient preferences, and the urgency required • Explains clinical reasoning behind diagnostic and clinical management decisions to patients/carers/guardians and other colleagues • Appropriately selects, manages and interprets investigations • Demonstrates appropriate continuing management of acute medical illness in a medical specialty setting • Refers patients appropriately to other specialties as required
GPCs	Domain 1: Professional values and behaviours Domain 2: Professional skills: • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 3: Professional knowledge • professional requirements • national legislation • the health service and healthcare systems in the four countries Domain 4: Capabilities in health promotion and illness prevention Domain 5: Capabilities in leadership and teamworking Domain 6: Capabilities in patient safety and quality improvement • patient safety • quality improvement
Evidence to inform decision	MCR MSF CbD ACAT Logbook of cases Simulation training with assessment
3. Providing continuity of care to medical inpatients, including management of comorbidities and cognitive impairment	
Descriptors	• Demonstrates professional behaviour with regard to patients, carers, colleagues and others • Delivers patient centred care including shared decision making • Demonstrates effective consultation skills • Formulates an appropriate diagnostic and management plan, taking into account patient preferences, and the urgency required • Explains clinical reasoning behind diagnostic and clinical management decisions to patients/carers/guardians and other colleagues • Demonstrates appropriate continuing management of acute medical illness inpatients admitted to hospital on an acute unselected take or selected take

	• Recognises need to liaise with specialty services and refers where appropriate Appropriately manages comorbidities in medial inpatients (unselected take, selected acute take or specialty admissions) • Demonstrates awareness of the quality of patient experience
GPCs	Domain 1: Professional values and behaviours Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 3: Professional knowledge • professional requirements • national legislation • the health service and healthcare systems in the four countries Domain 4: Capabilities in health promotion and illness prevention Domain 5: Capabilities in leadership and teamworking Domain 6: Capabilities in patient safety and quality improvement • patient safety • quality improvement
Evidence to inform decision	MCR MSF ACAT Mini-CEX DOPS
4. Managing patients in an outpatient clinic, ambulatory or community setting (including management of long term conditions)	
Descriptors	• Demonstrates professional behaviour with regard to patients, carers, colleagues and others • Delivers patient centred care including shared decision making • Demonstrates effective consultation skills • Formulates an appropriate diagnostic and management plan, taking into account patient preferences • Explains clinical reasoning behind diagnostic and clinical management decisions to patients/carers/guardians and other colleagues • Appropriately manages comorbidities in outpatient clinic, ambulatory or community setting • Demonstrates awareness of the quality of patient experience
GPCs	Domain 1: Professional values and behaviours Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty

	• clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 3: Professional knowledge • professional requirements • national legislation • the health service and healthcare systems in the four countries Domain 5: Capabilities in leadership and teamworking
Evidence to inform decision	MCR ACAT mini-CEX PS Letters generated at outpatient clinics

5. Managing medical problems in patients in other specialties and special cases	
Descriptors	• Demonstrates effective consultation skills (including when in challenging circumstances) • Demonstrates management of medical problems in inpatients under the care of other specialties • Demonstrates appropriate and timely liaison with other medical specialty services when required
GPCs	Domain 1: Professional values and behaviours Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 7: Capabilities in safeguarding vulnerable groups
Evidence to inform decision	MCR ACAT CbD

6. Managing a multidisciplinary team including effective discharge planning	
Descriptors	• Applies management and team working skills appropriately, including influencing, negotiating, continuously re-assessing priorities and effectively managing complex, dynamic situations • Ensures continuity and coordination of patient care through the appropriate transfer of information demonstrating safe and effective handover • Effectively estimates length of stay • Delivers patient centred care including shared decision making • Identifies appropriate discharge plan

	• Recognises the importance of prompt and accurate information sharing with primary care team following hospital discharge
GPCs	Domain 1: Professional values and behaviours Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 5: Capabilities in leadership and teamworking
Evidence to inform decision	MCR MSF ACAT Discharge summaries
7. Delivering effective resuscitation and managing the acutely deteriorating patient	
Descriptors	• Demonstrates prompt assessment of the acutely deteriorating patient, including those who are shocked or unconscious • Demonstrates the professional requirements and legal processes associated with consent for resuscitation • Participates effectively in decision making with regard to resuscitation decisions, including decisions not to attempt CPR, and involves patients and their families • Demonstrates competence in carrying out resuscitation
GPCs	Domain 1: Professional values and behaviours Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 3: Professional knowledge • professional requirements • national legislation • the health service and healthcare systems in the four countries Domain 5: Capabilities in leadership and teamworking Domain 6: Capabilities in patient safety and quality improvement • patient safety • quality improvement Domain 7: Capabilities in safeguarding vulnerable groups

Evidence to inform decision	MCR DOPS ACAT MSF ALS certificate Logbook of cases Reflection Simulation training with assessment

8. Managing end of life and applying palliative care skills	
Descriptors	• Identifies patients with limited reversibility of their medical condition and determines palliative and end of life care needs • Identifies the dying patient and develops an individualised care plan, including anticipatory prescribing at end of life • Demonstrates safe and effective use of syringe pumps in the palliative care population • Able to manage non complex symptom control including pain • Facilitates referrals to specialist palliative care across all settings • Demonstrates effective consultation skills in challenging circumstances • Demonstrates compassionate professional behaviour and clinical judgement
GPCs	Domain 1: Professional values and behaviours Domain 2: Professional skills: • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 3: Professional knowledge • professional requirements • national legislation • the health service and healthcare systems in the four countries
Evidence to inform decision	MCR CbD Mini-CEX MSF Regional teaching Reflection

3.4 Specialty capabilities in practice

The six specialty CiPs describe the clinical tasks or activities which are essential to the practice of Renal Medicine. The CiPs have been mapped to the nine GPC domains to reflect the professional generic capabilities required to undertake the clinical tasks.

Satisfactory sign off will require educational supervisors to make entrustment decisions on the level of supervision required for each CiP and if this is satisfactory for the stage of training, the trainee can progress. More detail is provided in the programme of assessment section of the curriculum.

Renal Medicine specialty CiPs	
1. Running a renal ward	
Descriptors	- Demonstrates professional behaviour with regard to patients, carers, colleagues and others - Delivers patient centred care including shared decision making - Demonstrates Clinical Leadership - Able to prioritise admissions and ensure safe discharge of patients - Takes a relevant patient history including patient symptoms, concerns, priorities and preferences - Performs accurate clinical examinations - Formulates an appropriate diagnostic and management plan, taking into account patient preferences, and the urgency required including provision of urgent dialysis - Explains clinical reasoning behind diagnostic and clinical management decisions to patients/carers/guardians and other colleagues - Applies management and team working skills appropriately, including influencing, negotiating, continuously re-assessing priorities and effectively managing complex, dynamic situations - Identifies patients with limited reversibility of their medical conditions and determines palliative and end of life care needs including appropriateness of provision of dialysis - Demonstrates appropriate and timely liaison with other specialty services when required - Demonstrates management of renal problems in inpatients under the care of other specialties
GPCs	Domain 1: Professional values and behaviours Domain 2: Professional skills - practical skills - communication and interpersonal skills - dealing with complexity and uncertainty - clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 3: Professional knowledge - professional requirements - national legislation - the health service and healthcare systems in the four countries

	Domain 4: Capabilities in health promotion and illness prevention Domain 5: Capabilities in leadership and teamworking Domain 6: Capabilities in patient safety and quality improvement
Evidence to inform decision	MCR MSF CbD ACAT ESNeph DOPS

2. Managing a haemodialysis and peritoneal dialysis programme	
Descriptors	• Demonstrates professional behaviour with regard to patients, carers, colleagues and others • Delivers patient centred care including shared decision making and shared care • Demonstrates effective consultation skills • Formulates an appropriate diagnostic and management plan, taking into account patient preferences including access for haemodialysis, workup for renal transplant, and end of life care and withdrawal from dialysis • Appropriately manages comorbidities in the dialysis unit or outpatient clinic • Demonstrated knowledge of management of quality, including audit of dialysis equipment and water quality • Demonstrates awareness of the quality of patient experience • Demonstrates appropriate and timely liaison with other specialty services • Recognises the importance of prompt and accurate information sharing with the primary care team
GPCs	Domain 1: Professional values and behaviours Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 3: Professional knowledge • professional requirements • national legislation • the health service and healthcare systems in the four countries Domain 4: Capabilities in health promotion and illness prevention Domain 5: Capabilities in leadership and teamworking Domain 6: Capabilities in patient safety and quality improvement • patient safety

	• quality improvement
Evidence to inform decision	MCR MSF CbD Mini CEX Reflection ESNeph Outpatient letters generated Attendance at dialysis course/conference

3. Running an acute renal referral service	
Descriptors	• Demonstrates professional behaviour with regard to patients, carers, colleagues and others • Delivers patient centred care including shared decision making • Demonstrates effective consultation skills including 'out of hours' working • Takes a relevant patient history and accurate clinical examination focused on the referral request and clinical situation. • Appropriately selects, manages and interprets investigations • Formulates an appropriate differential diagnosis. • Formulates an appropriate diagnostic and management plan, taking into account patient preferences, and the urgency required • Explains clinical reasoning behind diagnostic and clinical management decisions to patients/carers/guardians and other colleagues. • Demonstrates prompt and accurate information sharing with relevant professionals after the consultation.
GPCs	Domain 1: Professional values and behaviours Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills (history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease) Domain 3: Professional knowledge • professional requirements • national legislation • the health service and healthcare systems in the four countries Domain 4: Capabilities in health promotion and illness prevention Domain 5: Capabilities in leadership and teamworking Domain 6: Capabilities in patient safety and quality improvement
Evidence to inform decision	MCR MSF CbD ACAT

	ESNeph
	DOPS

4. Managing patients with chronic kidney disease (CKD) stages 1-5

Descriptors	• Demonstrates professional behaviour with regard to patients, carers, colleagues and others • Delivers patient centred care including shared decision making and shared care • Demonstrates effective consultation skills • Able to conduct an outpatient clinic and support management in the community with the multidisciplinary team • Demonstrates the use of investigations to assess the cause, severity and reversibility of CKD • Formulates an appropriate diagnostic and management plan, taking into account patient preferences including access for haemodialysis, preparation for peritoneal dialysis and workup for renal transplant. • Identifies patients with limited reversibility of their medical condition and discusses maximal conservative management of CKD and end of life care needs as appropriate • Appropriately manages comorbidities in the outpatient clinic • Demonstrates awareness of the quality of patient experience Demonstrates appropriate and timely liaison with other specialty services including those based in Primary Care
GPCs	Domain 1: Professional values and behaviours Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 3: Professional knowledge • professional requirements • national legislation • the health service and healthcare systems in the four countries Domain 4: Capabilities in health promotion and illness prevention Domain 5: Capabilities in leadership and teamworking Domain 6: Capabilities in patient safety and quality improvement
Evidence to inform decision	MCR MSF CbD ACAT ESNeph DOPS

5. Understanding of subspecialty clinical services

Descriptors	• Demonstrates professional behaviour with regard to patients, carers, colleagues and others • Delivers patient centred care including shared decision making • Demonstrates effective clinical leadership • Demonstrates appropriate and timely liaison with other specialty services when required • Demonstrates an understanding of relevant diseases and their treatments • Demonstrates an understanding of specific investigations including genetic testing and implications of the results. • Demonstrates an understanding of issues surrounding new therapies, clinic trials and the development of new clinics for specific patient groups • Demonstrate ability to keep up to date and / or learning from colleagues in other department or units where such a service is in place • Demonstrates an understanding of particular needs of certain groups (e.g. adolescent transition patients)
GPCs	Domain 1: Professional values and behaviours Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 3: Professional knowledge • professional requirements • national legislative requirements • the health service and healthcare systems in the four countries Domain 4: Capabilities in health promotion and illness prevention Domain 5: Capabilities in leadership and teamworking Domain 6: Capabilities in patient safety and quality improvement • patient safety • quality improvement Domain 7: Capabilities in safeguarding vulnerable groups Domain 9: Capabilities in research and scholarship
Evidence to inform decision	Attendance at relevant course / conference MCR Reflection mini-CEX ACAT CBD ESNeph

	Letters generated at outpatient clinics

6. Managing renal transplant patients

Descriptors	• Demonstrates professional behaviour with regard to patients, carers, colleagues and others • Delivers patient centred care including shared decision making • Demonstrates effective clinical leadership • Demonstrates an understanding of the indications for renal transplantation and risk versus benefit • Demonstrates an understanding of the fundamentals of renal transplantation and ability to assess recipients and transplant doctors • Demonstrates ability to apply knowledge when caring for acute and chronic transplant recipients including failing renal transplants • Demonstrates an understanding of live donor assessment • Demonstrates appropriate and timely liaison with other specialty services when required
GPCs	Domain 1: Professional values and behaviours Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 3: Professional knowledge • professional requirements • national legislative requirements • the health service and healthcare systems in the four countries Domain 4: Capabilities in health promotion and illness prevention Domain 5: Capabilities in leadership and teamworking Domain 6: Capabilities in patient safety and quality improvement • patient safety • quality improvement
Evidence to inform decision	MCR Reflection mini-CEX ACAT CBD ESNeph Letters generated at outpatient clinics Attendance at relevant course / conference

3.5 Content of Learning

The table below outlines the knowledge base required for Renal Medicine. Each of these should be regarded as a clinical context in which trainees should be able to demonstrate CiPs and GPCs. In this spiral curriculum, trainees will expand and develop the knowledge, skills and attitudes around managing patients with these conditions and presentations. The patient should always be at the centre of knowledge, learning and care.

Trainees must demonstrate core bedside skills, including information gathering through history and physical examination and information sharing with patients, families and colleagues.

Treatment care and strategy covers how a doctor selects drug treatments or interventions for a patient. It includes discussions and decisions as to whether care is focused mainly on curative intent or whether the main focus is on symptomatic relief. It also covers broader aspects of care, including involvement of other professionals or services.

Particular presentations, conditions and issues are listed either because they are common or serious (having high morbidity, mortality and/or serious implications for treatment or public health).

For each condition/presentation, trainees will need to be familiar with such aspects as aetiology, epidemiology, clinical features, investigation, management and prognosis. Our approach is to provide general guidance and not exhaustive detail, which would inevitably become out of date.

Theme	Content of learning	CiP

Disturbances of electrolyte and acid base balance	• Ability to assess and manage common acute and chronic electrolyte disorders to include:
	    ○ Iatrogenic electrolyte disturbance
	    ○ Acquired tubular disorders causing electrolyte and acid base imbalance in hospital and primary care
	    ○ Genetic tubular disorders
	• Ability to support primary care and non-renal services in the management of acute and chronic electrolyte disturbance
	• Ability to assess and manage metabolic acidosis in the acutely unwell patient
	• Understanding of the role of dialysis in the management of poisoning and drug overdose
		1,3,4,5

Acute Kidney Injury	• Understanding of the classification of acute kidney injury (AKI) • Ability to assess and manage AKI complicating hospital admission in an acute setting	1,3

	• Understanding of the role of healthcare information technology in management of AKI in hospitals
	• Ability to support non-renal services in the management of AKI
	• Ability to Identify and mitigate the risk of iatrogenic AKI during hospital admission.
	• Understanding of the aetiology of AKI to include
	    ○ All common tubular, tubulointerstitial and glomerular pathologies.
	    ○ Urological causes of AKI
	    ○ AKI in shock
	• Understanding of:
	    ○ Generic management of AKI
	    ○ Management of AKI in an intensive care setting
	    ○ Management of AKI in the context of systemic illness including infection, malignancy, heart, liver and haematological disease
	• Understanding of the indications for urgent renal replacement therapy
	• Understanding of the pharmacology and pharmacokinetics of common drugs in the context of AKI	

Chronic kidney disease	• Understanding of the classification of chronic kidney disease (CKD)
	• Understanding of the role of healthcare information technology in the identification and management of CKD in primary care
	• Ability to support primary care in the management of CKD
	• Ability to assess, and manage CKD to include:
	    ○ Identification of the cause, severity, and reversibility of CKD
	    ○ Disease specific management of causes of CKD
	    ○ Prevention of progression of CKD
	    ○ Timely planning for renal replacement therapy or active support care
	    ○ Management of renal anaemia, renal bone disease and other common complications of CKD
	• Understanding of the pharmacology and pharmacokinetics of common drugs in the context of CKD
		1,3,4,6

	• Ability to work with a multidisciplinary team in CKD management including pre-dialysis education, modality choice, vascular access, nutrition, renal bone disease, renal anaemia and supportive care • Ability to support non-renal services in the management of CKD in the context of systemic diseases	

Immune-mediated renal disease	• Understanding of the aetiology and natural history of all common types of glomerulonephritis and tubulointerstitial disease
	• Understanding of the indications for renal biopsy, preparation for renal biopsy, and complications of renal biopsy
	• Familiarity with histological classification of glomerulonephritis and ability to interpret renal histology reports
	• Ability to interpret laboratory test results in the context of immune mediated disease
	• Ability to identify and assess all common types of glomerulonephritis
	• Ability to manage all common types of glomerulonephritis with:
	    o Immunosuppressive drugs
	    o Biological agents
	    o Plasma exchange
	• Ability to monitor treatment response, disease progression and to identify and manage disease relapse
	• Ability to assess, and manage nephrotic syndrome
	• Understanding of glomerulonephritis in the context of systemic disease including:
	    o Connective tissue disease, vasculitis and SLE
	    o Infectious diseases
	    o Thrombotic microangiopathies
	    o Malignancy
	• Familiarity with indications for genetic testing
	• Ability to work with a multidisciplinary team in the management of glomerulonephritis
	• Understanding of the risk of disease recurrence following kidney transplantation
	• Knowledge of rare disease registries and relevant patient support groups
		1,3,4,5

Hereditary renal disease	• Understanding the role of genomics in renal medicine	1,3,4,5

	• Understanding of Mendelian inheritance • Understanding of the common single gene disorders affecting the kidney and awareness of rarer genetic renal disease • Familiarity with availability of genetic testing and appropriate use of genetic testing in the diagnosis and management of renal disease • Familiarity with the interpretation of genetic test results • Familiarity with genetic counselling, risk assessment of relatives and cascade screening • Awareness of relevant disease specific treatments for genetic renal disease • Ability to work with a multidisciplinary team in the management of genetic renal disease including clinical geneticists and genetic counsellors	
Metabolic renal disease	• Understanding of metabolic diseases affecting the kidney • Familiarity with available diagnostic tests for metabolic disease and indications for testing • Familiarity with disease-specific treatments for metabolic renal disease • Ability to work with a multidisciplinary team in the management of metabolic renal disease including metabolic medicine and clinical genetics • Awareness of regional and national specialist services to support rare diseases	1,3,4,5
Urological disease	• Understanding of the assessment and medical management of renal stone disease • Understanding of the assessment and medical management of urinary tract obstruction causing acute or chronic renal dysfunction • Familiarity with congenital and developmental urinary tract abnormalities and their relevance to kidney disease • Understanding of the assessment and management of urinary tract infections • Ability to work with a multidisciplinary team in the management of urological disease including interventional radiology and urology services	1,3,4,5,6
Kidney involvement in systemic disease	• Ability to assess and manage renal involvement in systemic disease • Ability to work with non-renal services to manage renal involvement in systemic disease	1,3,4,5

	• Ability to manage patients undergoing renal replacement therapy with underlying systemic disease
	• Understanding of the indication for renal transplantation in patients with systemic disease.
	• Familiarity with regional and national specialist services for specific diseases
	• Ability to work with multidisciplinary team and primary care to manage renal involvement in systemic disease
	
	Systemic diseases to include:
	
	Diabetes
	    o Understanding of, and ability to manage, diabetic nephropathy
	    o Ability to manage end-stage renal failure in diabetic patients
	    o Ability to manage complications in diabetic patients on dialysis or after a renal transplant
	    o Understanding of the role of kidney and kidney/pancreas transplantation in diabetic patients with CKD
	Hypertension
	    o Ability to assess hypertension and distinguish between primary and secondary causes
	    o Understanding of the pharmacology of antihypertensive drugs and ability to manage hypertension by pharmacological and non-pharmacological means
	    o Ability to recognise and to manage hypertensive emergencies
	    o Familiarity with guidelines for the management of hypertension
	Cardiovascular disease
	    o Understanding of risk factors for cardiovascular disease in patients with CKD
	    o Understanding of cardiovascular risk reduction strategies
	    o Ability to manage cardiovascular disease in patients undergoing dialysis
	Malignancy
	    o Understanding of the renal manifestations of malignant disease	

	o Ability to assess and manage renal disease in the context of malignancy o Understanding of the indications for renal replacement therapy in renal disease in malignancy Infectious diseases o Understanding of the renal manifestations of infectious diseases including viral infections, endocarditis, and tuberculosis o Ability to assess and manage renal involvement in infectious disease o Familiarity with the implication for renal transplantation in the context of infectious diseases	
Active supportive care	• Understanding of advanced CKD symptoms • Awareness of Advance Care Planning • Familiarity with the medicolegal framework for decisions regarding patient treatment and advance directives • Ability to work with a multidisciplinary team and with primary care, to support patients with advanced CKD who have not opted for renal replacement therapy, or during withdrawal of dialysis	1,2,4
Adult-paediatric interface	• Familiarity with transition from paediatric to adult care in nephrology. • Understanding of common renal diseases in childhood requiring long-term follow-up in adulthood. • Familiarity of renal transplantation in childhood and understanding of managing transplantation in young adults	2,5,6
Sexual health and Obstetric nephrology	• Ability to work with primary care and obstetrics in the management of sexual health and obstetrics in patients with renal disease • Understanding of the effect of CKD on fertility and knowledge of contraception in CKD • Familiarity with the implications of CKD on maternal and fetal health during pregnancy • Understanding of renal physiology in pregnancy and ability to interpret renal function tests during pregnancy • Familiarity with pre-conception counselling in CKD • Ability to manage kidney transplant recipients before and during pregnancy	3, 5

	• Ability to manage during pregnancy:
	   ○ immunosuppression therapy
	   ○ hypertension
	   ○ Acute kidney injury
	• Familiarity with the assessment and management of pre-eclampsia and HELLP	

Dialysis	• Understanding of the indications for acute and chronic dialysis
	• Understanding of the principles of peritoneal dialysis (PD), haemodialysis (HD), haemofiltration and variants thereof
	• Ability to work with a multidisciplinary team in the assessment, counselling, and preparation of patients for chronic dialysis
	• Ability to work with a multidisciplinary team to deliver acute inpatient HD, chronic HD, home-HD and PD therapy
	• Ability to manage,
	   ○ vascular access for acute and chronic HD
	   ○ the PD dialysis catheter
	• Ability to manage dialysis adequacy including interpretation and action of blood results
	• Knowledge of UK Kidney Association dialysis guidelines
	• Understanding of, and ability to manage, the complications of HD and PD
	• Familiarity with the running of a haemodialysis unit including assessment and monitoring of water quality
	• Understanding of the risk of blood borne virus infection in HD units
	• Familiarity with renal replacement therapy in an intensive care setting
		2

Renal Transplantation	• Understanding of the indications for cadaveric and living donor transplantation • Understanding of the assessment of the recipient for kidney transplantation • Familiarity with the immuno-genetics of solid organ transplantation • Understanding of standard transplant immunosuppression protocols and the side effects of immunosuppression • Ability to assess and manage common acute and chronic complications of transplantation including infection, rejection, renal tract obstruction and renal vascular pathology	6

	• Familiarity with the assessment of living kidney donors • Familiarity with the medical assessment of cadaveric kidney donors and the process of organ retrieval • Familiarity with the legal framework for transplantation in the UK • Familiarity with regional and national guidelines on renal transplantation and with the function of NHS Blood & Transplant • Ability to work in a multidisciplinary team including advanced nurse practitioners, renal transplant surgeons and renal pharmacists	

3.6 Practical procedures

There is one speciality specific procedural skill in which all trainees must become proficient. This is the insertion of temporary haemodialysis catheters to facilitate acute or urgent haemodialysis. Proficiency in the insertion of both femoral vein and internal jugular vein catheters is required.

Many trainees will also choose to become proficient in the placement of tunnelled dialysis catheters, native kidney biopsy, transplant kidney biopsy and placement of peritoneal dialysis catheters. These procedures are recommended but are not mandated in the curriculum. Local Education Providers that offer training in other procedures will need to put in place mechanisms to provide training and assure competence for independent practice.

Trainees must be able to outline the indications for these procedures and recognise the importance of valid consent, aseptic technique, safe use of analgesia and local anaesthetics, minimisation of patient discomfort, and requesting help when appropriate. For all practical procedures the trainee must be able to recognise complications and respond appropriately if they arise, including calling for help from colleagues in other specialties when necessary.

Trainees should receive training in procedural skills in a clinical skills lab if required. Assessment of procedural skills will be made using the direct observation of procedural skills (DOPS) tool. The table below sets out the minimum competency level expected for each of the practical procedures.

When a trainee has been signed off as being able to perform a procedure independently, they are not required to have any further assessment (DOPS) of that procedure, unless they or their educational supervisor think that this is required (in line with standard professional conduct).

Essential procedures

Procedure	ST4	ST5	ST6	ST7
Non-tunnelled intravenous dialysis catheters	Able to perform unsupervised	Maintain	Maintain	Maintain

Recommended procedures

Trainees will be expected to have knowledge of the following procedures including indications and how to deal with complications. It is not mandatory to be able to perform the procedures.

Procedure
Native Renal biopsy
Tunnelled intravenous dialysis catheters
Non-surgical insertion of peritoneal dialysis catheters
Transplant Renal Biopsy

4 Learning and Teaching

4.1 The training programme

The organisation and delivery of postgraduate training is the responsibility of the Health Education England (HEE), NHS Education for Scotland (NES), Health Education and Improvement Wales (HEIW) and the Northern Ireland Medical and Dental Training Agency (NIMDTA) – referred to from this point as 'deaneries'. A training programme director (TPD) will be responsible for coordinating the specialty training programme. In England, the local organisation and delivery of training is overseen by a school of medicine.

Progression through the programme will be determined by the Annual Review of Competency Progression (ARCP) process and the training requirements for each indicative year of training are summarised in the ARCP decision aid (available on the JRCPTB website).

The sequence of training should ensure appropriate progression in experience and responsibility. The training to be provided at each training site is defined to ensure that, during the programme, the curriculum requirements are met and also that unnecessary duplication and educationally unrewarding experiences are avoided.

The following provides a guide on how training programmes should be focused in each training year in order for trainees to gain the experience and develop the capabilities to the level required.

When training in IM stage 2 all trainees will have an appropriate clinical supervisor (a senior member of the IM team) and a named educational supervisor. The clinical supervisor and educational supervisor may be the same person. It will be best practice for trainees to have an educational supervisor who practises internal medicine for periods of IM stage 2 training.

Educational supervisors of IM trainees who do not themselves practise IM must take particular care to ensure that they obtain and consider detailed feedback from clinical supervisors who are knowledgeable about the trainees' IM performance and include this in their educational reports.

4.2 Teaching and learning methods

The curriculum will be delivered through a variety of learning experiences and will achieve the capabilities described in the syllabus through a variety of learning methods. There will be a balance of different modes of learning from formal teaching programmes to experiential learning 'on the job'. The proportion of time allocated to different learning methods may vary depending on the nature of the attachment within a rotation.

This section identifies the types of situations in which a trainee will learn.

Work-based experiential learning - The content of work-based experiential learning is decided by the local faculty for education but includes active participation in:

Medical clinics including specialty clinics
The educational objectives of attending clinics are:
- To understand the management of chronic diseases
- Be able to assess a patient in a defined time-frame
- To interpret and act on the referral letter to clinic
- To propose an investigation and management plan in a setting different from the acute medical situation
- To review and amend existing investigation plans
- To write an acceptable letter back to the referrer
- To communicate with the patient and where necessary relatives and other health care professionals.

These objectives can be achieved in a variety of settings including hospitals, day care facilities, community and virtual teleconsultations. The clinic might be primarily run by a specialist nurse (or other qualified health care professionals) rather than a consultant physician. After initial induction, trainees will review patients in clinic settings, under direct supervision. The degree of responsibility taken by the trainee will increase as competency increases. Trainees should see a range of new and follow-up patients and present their findings to their clinical supervisor. Clinic letters written by the trainee should also be reviewed and feedback given.

The number of patients that a trainee should see in each clinic is not defined, neither is the time that should be spent in clinic, but as a guide this should be a minimum of two hours.

Clinic experience should be used as an opportunity to undertake supervised learning events and reflection.

Specialty specific takes
Trainees will be involved in the speciality specific take during the training programme.

Reviewing patients with consultants

It is important that trainees have an opportunity to present at least a proportion of the patients whom they have admitted to their consultant for senior review in order to obtain immediate feedback into their performance (that may be supplemented by an appropriate WBA such as an ACAT, mini-CEX or CBD). This may be accomplished when working on a take shift along with a consultant, or on a post-take ward round with a consultant.

Personal ward rounds and provision of ongoing clinical care on specialist renal ward attachments

Every patient seen, on the ward or in outpatients, provides a learning opportunity, which will be enhanced by following the patient through the course of their illness. The experience of the evolution of patients' problems over time is a critical part both of the diagnostic process as well as management. Patients seen should provide the basis for critical reading and reflection on clinical problems.

Ward rounds by more senior doctors

Every time a trainee observes another doctor seeing a patient or their relatives there is an opportunity for learning. Ward rounds (including post-take) should be led by a more senior doctor and include feedback on clinical and decision-making skills.

Multidisciplinary team meetings

There are many situations where clinical problems are discussed with clinicians in other disciplines. These provide excellent opportunities for observation of clinical reasoning.

Trainees have supervised responsibility for the care of inpatients. This includes day-to-day review of clinical conditions, note keeping, and the initial management of the acutely ill patient with referral to and liaison with clinical colleagues as necessary. The degree of responsibility taken by the trainee will increase as competency increases. There should be appropriate levels of clinical supervision throughout training, with increasing clinical independence and responsibility.

Palliative and end of life care

Trainees undertaking a palliative medicine attachment will see palliative care patients with a range of life-limiting illnesses, including cancer, frailty, multi-morbidity, dementia and organ failure. They will gain expertise in:

- Managing difficult physical symptoms;
- Managing psychological, spiritual and existential distress for patients and those close to them;
- Addressing complex social issues for patients at the end of life (including facilitating preferences for place of care and death);
- Managing challenging symptoms in the dying patient;
- Identifying those in need of proactive or enhanced bereavement support;
- Managing palliative care patients out of hours, including in non-acute settings (hospice and community).

These learning objectives and experience of end of life care can be achieved during attachments to routine medical teams (eg geriatric medicine, oncology, respiratory medicine) and ICU, which will allow a trainee to acquire and demonstrate the necessary capabilities to comply with IM clinical CiP 8. An attachment with a specific palliative care team and/or consultant would give a broader perspective in this complex and important area, hence training programme directors and those managing both acute medical and palliative care services are encouraged to consider how this might be achieved.

Formal postgraduate teaching
The content of these sessions are determined by the local faculty of medical education and will be based on the curriculum. There are many opportunities throughout the year for formal teaching in the local postgraduate teaching sessions and at regional, national and international meetings. Many of these are organised by the Royal Colleges of Physicians.

Suggested activities include:
- a programme of formal bleep-free regular teaching sessions to cohorts of trainees (eg a weekly training hour for IM teaching within a training site)
- case presentations
- research, audit and quality improvement projects
- lectures and small group teaching
- Grand Rounds
- clinical skills demonstrations and teaching
- critical appraisal and evidence based medicine and journal clubs
- joint specialty meetings
- attendance at training programmes organised on a deanery or regional basis, which are designed to cover aspects of the training programme outlined in this curriculum.

Learning with peers - There are many opportunities for trainees to learn with their peers. Local postgraduate teaching opportunities allow trainees of varied levels of experience to come together for small group sessions.

Independent self-directed learning
Trainees will use this time in a variety of ways depending upon their stage of learning. Suggested activities include:
- reading, including web-based material such as e-Learning for Healthcare (e-LfH)
- maintenance of personal portfolio (self-assessment, reflective learning, personal development plan)
- audit, quality improvement and research projects
- reading journals
- achieving personal learning goals beyond the essential, core curriculum

Formal study courses
Time to be made available for formal courses is encouraged, subject to local conditions of service. Examples include management and leadership courses and communication courses, which are particularly relevant to patient safety and experience.

4.3 Academic training

The four nations have different arrangements for academic training and doctors in training should consult the local deanery for further guidance.

Trainees may train in academic medicine as an academic clinical fellow (ACF), academic clinical lecturer (ACL) or equivalent. Some trainees may opt to do research leading to a higher degree without being appointed to a formal academic programme. This new curriculum should not impact in any way on the facility to take time out of programme for research (OOPR) but as now, such time requires discussion between the trainee, the TPD and the Deanery as to what is appropriate together with guidance from the appropriate SAC that the proposed period and scope of study is sensible.

4.4 Taking time out of programme

There are a number of circumstances when a trainee may seek to spend some time out of specialty training, such as undertaking a period of research or taking up a fellowship post. Taking time out of programme to undertake research or other academic activity (OOPR) is not mandatory, but the value of OOPR for the individual trainee and for the wider clinical and academic renal community is recognised. Time out of programme for research is therefore encouraged and supported. All such requests must however be agreed by the postgraduate dean in advance and trainees are advised to discuss their proposals as early as possible. Full guidance on taking time out of programme can be found in the Gold Guide.

4.5 Acting up as a consultant

A trainee coming towards the end of their training may spend up to three months "acting-up" as a consultant, provided that a consultant supervisor is identified for the post and satisfactory progress is made. As long as the trainee remains within an approved training programme, the GMC does not need to approve this period of acting up and their original CCT date will not be affected. More information on acting up as a consultant can be found in the Gold Guide.

5 Programme of Assessment

5.1 Purpose of assessment

The purpose of the programme of assessment is to:
- assess trainees' actual performance in the workplace
- enhance learning by providing formative assessment, enabling trainees to receive immediate feedback, understand their own performance and identify areas for development
- drive learning and enhance the training process by making it clear what is required of trainees and motivating them to ensure they receive suitable training and experience
- demonstrate trainees have acquired the GPCs and meet the requirements of GMP

- ensure that trainees possess the essential underlying knowledge required for their specialty
- provide robust, summative evidence that trainees are meeting the curriculum standards during the training programme;
- inform the ARCP, identifying any requirements for targeted or additional training where necessary and facilitating decisions regarding progression through the training programme;
- identify trainees who should be advised to consider changes of career direction.

5.2 Programme of Assessment

Our programme of assessment refers to the integrated framework of exams, assessments in the workplace and judgements made about a learner during their approved programme of training. The purpose of the programme of assessment is to robustly evidence, ensure and clearly communicate the expected levels of performance at critical progression points, and to demonstrate satisfactory completion of training as required by the curriculum.

The programme of assessment is comprised of several different individual types of assessment. A range of assessments is needed to generate the necessary evidence required for global judgements to be made about satisfactory performance, progression in, and completion of, training. All assessments, including those conducted in the workplace, are linked to the relevant curricular learning outcomes (eg through the blueprinting of assessment system to the stated curricular outcomes).

The programme of assessment emphasises the importance and centrality of professional judgement in making sure learners have met the learning outcomes and expected levels of performance set out in the approved curricula. Assessors will make accountable, professional judgements. The programme of assessment includes how professional judgements are used and collated to support decisions on progression and satisfactory completion of training.

The assessments will be supported by structured feedback for trainees. Assessment tools will be both formative and summative and have been selected on the basis of their fitness for purpose.

Assessment will take place throughout the training programme to allow trainees continually to gather evidence of learning and to provide formative feedback. Those assessment tools which are not identified individually as summative will contribute to summative judgements about a trainee's progress as part of the programme of assessment. The number and range of these will ensure a reliable assessment of the training relevant to their stage of training and achieve coverage of the curriculum.

Reflection and feedback should be an integral component to all SLEs and WBPAs. In order for trainees to maximise benefit, reflection and feedback should take place as soon as possible after an event. Every clinical encounter can provide a unique opportunity for reflection and feedback and this process should occur frequently. Feedback should be of high quality and should include an action plan for future development for the trainee. Both

trainees and trainers should recognise and respect cultural differences when giving and receiving feedback.

5.3 Assessment of CiPs

Assessment of CiPs involves looking across a range of different skills and behaviours to make global decisions about a learner's suitability to take on particular responsibilities or tasks.

Clinical supervisors and others contributing to assessment will provide formative feedback to the trainee on their performance throughout the training year. This feedback will include a global rating in order to indicate to the trainee and their educational supervisor how they are progressing at that stage of training. To support this, workplace based assessments and multiple consultant reports will include global assessment anchor statements.

Global assessment anchor statements

➢ Below expectations for this year of training; may not meet the requirements for critical progression point
➢ Meeting expectations for this year of training; expected to progress to next stage of training
➢ Above expectations for this year of training; expected to progress to next stage of training

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Towards the end of the training year, trainees will make a self-assessment of their progression for each CiP and record this in the eportfolio with signposting to the evidence to support their rating.

The educational supervisor (ES) will review the evidence in the eportfolio including workplace based assessments, feedback received from clinical supervisors (via the Multiple Consultant Report) and the trainee's self-assessment and record their judgement on the trainee's performance in the ES report, with commentary.

For **generic CiPs**, the ES will indicate whether the trainee is meeting expectations or not using the global anchor statements above. Trainees will need to be meeting expectations for the stage of training as a minimum to be judged satisfactory to progress to the next training year.

For **clinical and specialty CiPs**, the ES will make an entrustment decision for each CiP and record the indicative level of supervision required with detailed comments to justify their entrustment decision. The ES will also indicate the most appropriate global anchor statement (see above) for overall performance.

Level descriptors for clinical and specialty CiPs

Level	Descriptor
Level 1	**Entrusted to observe only** – no provision of clinical care
Level 2	**Entrusted to act with direct supervision**:

	The trainee may provide clinical care, but the supervising physician is physically within the hospital or other site of patient care and is immediately available if required to provide direct bedside supervision
Level 3	**Entrusted to act with indirect supervision**: The trainee may provide clinical care when the supervising physician is not physically present within the hospital or other site of patient care, but is available by means of telephone and/or electronic media to provide advice, and can attend at the bedside if required to provide direct supervision
Level 4	**Entrusted to act unsupervised**

The ARCP will be informed by the ES report and the evidence presented in the eportfolio. The ARCP panel will make the final summative judgement on whether the trainee has achieved the generic outcomes and the appropriate level of supervision for each CiP. The ARCP panel will determine whether the trainee can progress to the next year/level of training in accordance with the Gold Guide. ARCPs will be held for each training year. The final ARCP will ensure trainees have achieved level 4 in all CiPs for the critical progression point at completion of training.

5.4 Critical progression points

There will be a key progression point on completion of specialty training. Trainees will be required to be entrusted at level 4 in all CiPs in order to achieve an ARCP outcome 6 and be recommended for a CCT.

The educational supervisor report will make a recommendation to the ARCP panel as to whether the trainee has met the defined levels for the CiPs and acquired the procedural competence required for each year of training. The ARCP panel will make the final decision on whether the trainee can be signed off and progress to the next year/level of training [see section 5.6].

The outline grids below set out the expected level of supervision and entrustment for the IM clinical CiPs and the specialty CiPs and include the critical progression points across the whole training programme.

Table 1: Outline grid of levels expected for Internal Medicine clinical capabilities in practice (CiPs)

Levels to be achieved at the end of each training year

Level descriptors
Level 1: Entrusted to observe only – no clinical care; Level 2: Entrusted to act with direct supervision; Level 3: Entrusted to act with indirect supervision; Level 4: Entrusted to act unsupervised

IM Clinical CiP	ST4	ST5	ST6	ST7	
1. Managing an acute unselected take	3	3	3	4	**CRITICAL PROGRESSION POINT**
2. Managing the acute care of patients within a medical specialty service	2	3	3	4	
3. Providing continuity of care to medical inpatients	3	3	3	4	
4. Managing outpatients with long term conditions	3	3	3	4	
5. Managing medical problems in patients in other specialties and special cases	3	3	3	4	
6. Managing an MDT including discharge planning	3	3	3	4	
7. Delivering effective resuscitation and managing the deteriorating patient	4	4	4	4	
8. Managing end of life and applying palliative care skills	3	3	3	4	

Table 2: Outline grid of levels expected for Renal Medicine specialty capabilities in practice (CiPs)

Levels to be achieved by the end of each training year – Not all local educational providers will offer training in all CiPs. The level achievable in each year may therefore be determined by the structure of the individual's training rotation.

Level descriptors
Level 1: Entrusted to observe only – no clinical care; Level 2: Entrusted to act with direct supervision; Level 3: Entrusted to act with indirect supervision; Level 4: Entrusted to act unsupervised

Specialty CiP	ST4	ST5	ST6	ST7	
1. Running a renal ward	2	2	3	4	CRITICAL PROGRESSION POINT
2. Managing a haemodialysis and peritoneal dialysis programme	2	2	3	4	
3. Running an acute renal referral service	2	2	3	4	
4. Managing patients with chronic kidney disease stages I-IV	2	2	3	4	
5. Understanding of a subspecialty clinical service	2	2	3	4	
6. Managing transplant patients	2	2	3	4	

5.5 Evidence of progress

The following methods of assessment will provide evidence of progress in the integrated programme of assessment. The requirements for each training year/level are stipulated in the ARCP decision aid (www.jrcptb.org.uk).

Supervisor's reports

Educational supervisors report (ESR)
The ESR will be central to the assessment process. The ES will periodically (at least annually) prepare a longitudinal, global report of a trainee's progress based on a range of assessments. The ESR may be informed by observation by the Educational Supervisor of the trainee in practice, as well as by all the assessment tools and methods described below. The ESR will include the supervisor's summative judgement of the trainee's performance and the entrustment decisions given for the learning outcomes (CiPs). Each individual speciality CiP will be referenced in the ESR. The ESR should incorporate commentary or reports from longitudinal observations, such as from supervisors (MCRs) and formative assessments demonstrating progress over time.

Multiple Consultant Report (MCR)
The MCR captures the views of consultant supervisors based on observation on a trainee's performance in practice. The MCR feedback and comments received give valuable insight into how well the trainee is performing, highlighting areas of excellence and areas of support required. MCR feedback will be available to the trainee and contribute to the educational supervisor's report.

Summative assessment

Examinations and certificates
- Advanced Life Support Certificate (ALS)
- European Specialty Examination Nephrology (ESENeph)

The Federation of Royal Colleges of Physicians of the UK, in association with the British Renal Society has developed an examination for Renal Medicine, the European Specialty Examination Nephrology (ESENeph). The examination tests the extra knowledge base that trainees have acquired since taking the MRCP(UK) diploma. The knowledge base itself must be associated with adequate use of such knowledge and passing this examination must be combined with satisfactory progress in workplace based assessments for the trainee to successfully reach the end of training and be awarded the CCT. Information is available on the MRCP(UK) website ([www.mrcpuk.org)](www.mrcpuk.org).

Workplace based assessment (WPBA)

The curriculum does not mandate specific types or quantities of workplace based assessments required to inform the ESR. Use of these assessment tools should be directed

by the Educational Supervisor and the trainee according to the training context and the individual's training requirements.

Summative assessment

- Direct Observation of Procedural Skills (DOPS)

Formative assessment

Supervised Learning Events (SLEs)
- Acute Care Assessment Tool (ACAT)
- Case-Based Discussions (CbD)
- mini-Clinical Evaluation Exercise (mini-CEX)

WPBA
- Direct Observation of Procedural Skills (DOPS)
- Multi-Source Feedback (MSF)
- Patient Survey (PS)
- Quality Improvement Project Assessment Tool (QIPAT)
- Teaching Observation (TO)

These methods are described briefly below. More information and guidance for trainees and assessors are available in the eportfolio and on the JRCPTB website (www.jrcptb.org.uk).

Assessment should be recorded in the trainee's eportfolio. These methods include feedback opportunities as an integral part of the programme of assessment.

Acute Care Assessment Tool (ACAT)
The ACAT is designed to assess and facilitate feedback on a doctor's performance during their practice on the acute medical take. It is primarily for assessment of their ability to prioritise, to work efficiently, to work with and lead a team, and to interact effectively with nursing and other colleagues. It can also be used for assessment and feedback in relation to care of individual patients. Any doctor who has been responsible for the supervision of the acute medical take can be the assessor for an ACAT.

Case-based Discussion (CbD)
The CbD assesses the performance of a trainee in their management of a patient to provide an indication of competence in areas such as clinical reasoning, decision-making and application of medical knowledge in relation to patient care. It also serves as a method to document conversations about, and presentations of, cases by trainees. The CbD should focus on a written record (such as written case notes, outpatient letter, and discharge summary). A typical encounter might be when presenting newly referred patients in the outpatient department.

mini-Clinical Evaluation Exercise (mini-CEX)
This tool evaluates a clinical encounter with a patient to provide an indication of competence in skills essential for good clinical care such as history taking, examination and clinical reasoning. The trainee receives immediate feedback to aid learning. The mini-CEX can be used at any time and in any setting when there is a trainee and patient interaction and an assessor is available.

Direct Observation of Procedural Skills (DOPS)
A DOPS is an assessment tool designed to evaluate the performance of a trainee in undertaking a practical procedure, against a structured checklist. The trainee receives immediate feedback to identify strengths and areas for development. DOPS can be undertaken as many times as the trainee and their supervisor feel is necessary (formative). A trainee can be regarded as competent to perform a procedure independently after they are signed off as such by an appropriate assessor (summative).

Multi-source feedback (MSF)
This tool is a method of assessing generic skills such as communication, leadership, team working, reliability etc, across the domains of Good Medical Practice. This provides systematic collection and feedback of performance data on a trainee, derived from a number of colleagues. 'Raters' are individuals with whom the trainee works, and includes doctors, administrative staff, and other allied professionals. Raters should be agreed with the educational supervisor at the start of the training year. The trainee will not see the individual responses by raters. Feedback is given to the trainee by the Educational Supervisor.

Patient Survey (PS)
A trainee's interaction with patients should be continually observed and assessed. The Patient Survey provides a tool to assess a trainee during a consultation period. The Patient Survey assesses the trainee's performance in areas such as interpersonal skills, communication skills and professionalism.

Quality Improvement Project Assessment Tool (QIPAT)
The QIPAT is designed to assess a trainee's competence in completing a quality improvement project. The QIPAT can be based on review of quality improvement project documentation or on a presentation of the quality improvement project at a meeting. If possible the trainee should be assessed on the same quality improvement project by more than one assessor.

Teaching Observation (TO)
The TO form is designed to provide structured, formative feedback to trainees on their competence at teaching. The TO can be based on any instance of formalised teaching by the trainee which has been observed by the assessor. The process should be trainee-led (identifying appropriate teaching sessions and assessors).

5.6 Decisions on progress (ARCP)

The decisions made at critical progression points and upon completion of training should be clear and defensible. They must be fair and robust and make use of evidence from a range of assessments, potentially including exams and observations in practice or reflection on behaviour by those who have appropriate expertise or experience. They can also incorporate commentary or reports from longitudinal observations, such as from supervisors or formative assessments demonstrating progress over time.

Periodic (at least annual) review should be used to collate and systematically review evidence about a doctor's performance and progress in a holistic way and make decisions about their progression in training. The annual review of progression (ARCP) process supports the collation and integration of evidence to make decisions about the achievement of expected outcomes.

Assessment of CiPs involves looking across a range of different skills and behaviours to make global decisions about a learner's suitability to take on particular responsibilities or tasks, as do decisions about the satisfactory completion of presentations/conditions and procedural skills set out in this curriculum. The outline grid in section 5.4 sets out the level of supervision expected for each of the clinical and specialty CiPs. The table of practical procedures sets out the minimum level of performance expected at the end of each year or training. The requirements for each year of training are set out in the ARCP decision aid (www.jrcptb.org.uk).

The ARCP process is described in the Gold Guide. Deaneries are responsible for organising and conducting ARCPs. The evidence to be reviewed by ARCP panels should be collected in the trainee's eportfolio.

As a precursor to ARCPs, JRCPTB strongly recommend that trainees have an informal eportfolio review either with their educational supervisor or arranged by the local school of medicine. These provide opportunities for early detection of trainees who are failing to gather the required evidence for ARCP.

There should be review of the trainee's progress to identify any outstanding targets that the trainee will need to complete to meet all the learning outcomes for completion training approximately 12-18 months before CCT. This should include an external assessor from outside the training programme.

In order to guide trainees, supervisors and the ARCP panel, JRCPTB has produced an ARCP decision aid which sets out the requirements for a satisfactory ARCP outcome at the end of each training year and critical progression point. The ARCP decision aid is available on the JRCPTB website www.jrcptb.org.uk.

Poor performance should be managed in line with the Gold Guide.

5.7 Assessment blueprint

The Educational Supervisor's Report (ESR) is central to the assessment of renal speciality CiPs. The Educational Supervisor is expected to make a judgement on the entrustment level

achieved by the trainee for each speciality CiP at least annually. The Educational Supervisor may use any of the described methods of assessment to inform this judgement, as well as evidence derived from direct observation and clinical supervision, or any other relevant evidence provided by the trainee.

The ARCP decision aid defines the recommended and mandatory evidence required for progression at each ARCP.

The table below show the possible methods of assessment for each CiP. It is not expected that every method will be used for each competency and additional evidence may be used to help make a judgement on capability.

KEY

ACAT	Acute care assessment tool	ALS	Advanced Life Support
CbD	Case-based discussion	DOPS	Direct observation of procedural skills
ESENeph	European Specialty Examination Nephrology	GCP	Good Clinical Practice
Mini-CEX	Mini-clinical evaluation exercise	MCR	Multiple consultant report
MSF	Multi source feedback	PS	Patient survey
QIPAT	Quality improvement project assessment tool	TO	Teaching observation

Blueprint of workplace based and knowledge based assessments mapped to CiPs

Learning outcomes	ACAT	CbD	DOPS	MCR	Mini-CEX	MSF	PS	QIPAT	TO	ESNeph
Generic CiPs										
Able to function successfully within NHS organisational and management systems				√		√				
Able to deal with ethical and legal issues related to clinical practice		√	√	√	√	√				
Communicates effectively and is able to share decision making, while maintaining appropriate situational awareness, professional behaviour and professional judgement				√		√	√			
Is focused on patient safety and delivers effective quality improvement in patient care				√		√		√		
Carrying out research and managing data appropriately				√		√				
Acting as a clinical teacher and clinical supervisor				√		√			√	
Clinical CiPs										

Learning outcomes	ACAT	CbD	DOPS	MCR	Mini-CEX	MSF	PS	QIPAT	TO	ESNeph
Managing an acute unselected take	√	√		√		√				
Managing the acute care of patients within a medical specialty service	√	√		√		√				
Providing continuity of care to medical inpatients, including management of comorbidities and cognitive impairment	√		√	√	√	√				
Managing patients in an outpatient clinic, ambulatory or community setting, including management of long term conditions	√			√	√		√			
Managing medical problems in patients in other specialties and special cases	√	√		√						
Managing a multidisciplinary team including effective discharge planning	√			√		√				
Delivering effective resuscitation and managing the acutely deteriorating patient	√		√	√		√				
Managing end of life and applying palliative care skills		√		√	√	√				
Practical procedural skills			√							
Renal Medicine specialty CiPs										
Running a renal ward	√	√	√	√		√				√
Managing a haemodialysis and peritoneal dialysis programme		√		√	√	√				√
Running an acute renal referral service	√	√	√	√	√	√				√
Managing patients with chronic kidney disease stages I-IV	√	√	√	√	√	√				√
Understanding of a subspecialty clinical service	√	√		√	√					√
Managing transplant patients	√	√		√	√					√

6 Supervision and feedback

This section of the curriculum describes how trainees will be supervised, and how they will receive feedback on performance. For further information please refer to the AoMRC guidance on Improving feedback and reflection to improve learning[3].

Access to high quality, supportive and constructive feedback is essential for the professional development of the trainee. Trainee reflection is an important part of the feedback process and exploration of that reflection with the trainer should ideally be a two way dialogue. Effective feedback is known to enhance learning and combining self-reflection to feedback promotes deeper learning.

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[3] Improving feedback and reflection to improve learning. A practical guide for trainees and trainers

Trainers should be supported to deliver valuable and high quality feedback. This can be by providing face to face training to trainers. Trainees would also benefit from such training as they frequently act as assessors to junior doctors, and all involved could also be shown how best to carry out and record reflection.

6.1 Supervision

All elements of work in training posts must be supervised with the level of supervision varying depending on the experience of the trainee and the clinical exposure and case mix undertaken. Outpatient and referral supervision must routinely include the opportunity to discuss all cases with a supervisor if appropriate. As training progresses the trainee should have the opportunity for increasing autonomy, consistent with safe and effective care for the patient.

Organisations must make sure that each doctor in training has access to a named clinical supervisor and a named educational supervisor. Depending on local arrangements these roles may be combined into a single role of educational supervisor. However, it is preferred that a trainee has a single named educational supervisor for (at least) a full training year, in which case the clinical supervisor is likely to be a different consultant during some placements.

The role and responsibilities of supervisors have been defined by the GMC in their standards for medical education and training[4].

Educational supervisor
The educational supervisor is responsible for the overall supervision and management of a doctor's educational progress during a placement or a series of placements. The educational supervisor regularly meets with the doctor in training to help plan their training, review progress and achieve agreed learning outcomes. The educational supervisor is responsible for the educational agreement, and for bringing together all relevant evidence to form a summative judgement about progression at the end of the placement or a series of placements. Trainees on a dual training program may have a single educational supervisor responsible for their internal medicine and specialty training, or they may have two educational supervisors, one responsible for internal medicine and one for specialty.

Clinical supervisor
Consultants responsible for patients that a trainee looks after provide clinical supervision for that trainee and thereby contribute to their training; they may also contribute to assessment of their performance by completing a 'Multiple Consultant Report (MCR)' and other WPBAs. A trainee may also be allocated (for instance, if they are not working with their educational supervisor in a particular placement) a named clinical supervisor, who is responsible for reviewing the trainee's training and progress during a particular placement. It is expected that a named clinical supervisor will provide a MCR for the trainee to inform the Educational Supervisor's report.

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[4] Promoting excellence: standards for medical education and training

The educational and (if relevant) clinical supervisors, when meeting with the trainee, should discuss issues of clinical governance, risk management and any report of any untoward clinical incidents involving the trainee. If the service lead (clinical director) has any concerns about the performance of the trainee, or there are issues of doctor or patient safety, these would be discussed with the clinical and educational supervisors (as well as the trainee). These processes, which are integral to trainee development, must not detract from the statutory duty of the trust to deliver effective clinical governance through its management systems.

Educational and clinical supervisors need to be formally recognised by the GMC to carry out their roles[5]. It is essential that training in assessment is provided for trainers and trainees in order to ensure that there is complete understanding of the assessment system, assessment methods, their purposes and use. Training will ensure a shared understanding and a consistency in the use of the WPBAs and the application of standards.

Opportunities for feedback to trainees about their performance will arise through the use of the workplace based assessments, regular appraisal meetings with supervisors, other meetings and discussions with supervisors and colleagues, and feedback from ARCP.

Trainees
Trainees should make the safety of patients their first priority and they should not be practising in clinical scenarios which are beyond their experiences and competencies without supervision. Trainees should actively devise individual learning goals in discussion with their trainers and should subsequently identify the appropriate opportunities to achieve said learning goals. Trainees would need to plan their WPBAs accordingly to enable their WPBAs to collectively provide a picture of their development during a training period. Trainees should actively seek guidance from their trainers in order to identify the appropriate learning opportunities and plan the appropriate frequencies and types of WPBAs according to their individual learning needs. It is the responsibility of trainees to seek feedback following learning opportunities and WPBAs. Trainees should self-reflect and self-evaluate regularly with the aid of feedback. Furthermore, trainees should formulate action plans with further learning goals in discussion with their trainers.

6.2 Appraisal

A formal process of appraisals and reviews underpins training. This process ensures adequate supervision during training, provides continuity between posts and different supervisors and is one of the main ways of providing feedback to trainees. All appraisals should be recorded in the eportfolio

Induction Appraisal
The trainee and educational supervisor should have an appraisal meeting at the beginning of each post to review the trainee's progress so far, agree learning objectives for the post ahead and identify the learning opportunities presented by the post. Reviewing progress through the curriculum will help trainees to compile an effective Personal Development Plan

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[5] Recognition and approval of trainers

(PDP) of objectives for the upcoming post. This PDP should be agreed during the Induction Appraisal. The trainee and supervisor should also both sign the educational agreement in the e-portfolio at this time, recording their commitment to the training process.

Mid-point Review
This meeting between trainee and educational supervisor is not mandatory (particularly when an attachment is shorter than 6 months) but is encouraged particularly if either the trainee or educational or clinical supervisor has training concerns or the trainee has been set specific targeted training objectives at their ARCP).At this meeting trainees should review their PDP with their supervisor using evidence from the e-portfolio. Workplace based assessments and progress through the curriculum can be reviewed to ensure trainees are progressing satisfactorily, and attendance at educational events should also be reviewed. The PDP can be amended at this review.

End of Attachment Appraisal
Trainees should review the PDP and curriculum progress with their educational supervisor using evidence from the e-portfolio. Specific concerns may be highlighted from this appraisal. The end of attachment appraisal form should record the areas where further work is required to overcome any shortcomings. Further evidence of competence in certain areas may be needed, such as planned workplace based assessments, and this should be recorded. If there are significant concerns following the end of attachment appraisal then the programme director should be informed. Supervisors should also identify areas where a trainee has performed about the level expected and highlight successes.

7   Quality Management

The organisation of training programs is the responsibility of the deaneries. The deaneries will oversee programmes for postgraduate medical training in their regions. The Schools of Medicine in England, Wales and Northern Ireland and the Medical Specialty Training Board in Scotland will undertake the following roles:
* oversee recruitment and induction of trainees into the specialty
* allocate trainees into particular rotations appropriate to their training needs
* oversee the quality of training posts provided locally
* ensure adequate provision of appropriate educational events
* ensure curricula implementation across training programmes
* oversee the workplace based assessment process within programmes
* coordinate the ARCP process for trainees
* provide adequate and appropriate career advice
* provide systems to identify and assist doctors with training difficulties
* provide flexible training.

Educational programmes to train educational supervisors and assessors in workplace based assessment may be delivered by deaneries or by the colleges or both.

Development, implementation, monitoring and review of the curriculum are the responsibility of the JRCPTB and the SAC. The committee will be formally constituted with representatives from each health region in England, from the devolved nations and with

trainee and lay representation. It will be the responsibility of the JRCPTB to ensure that curriculum developments are communicated to heads of school, regional specialty training committees and TPDs.

The JRCPTB has a role in quality management by monitoring and driving improvement in the standard of all medical specialties on behalf of the three Royal Colleges of Physicians in Edinburgh, Glasgow and London. The SACs are actively involved in assisting and supporting deaneries to manage and improve the quality of education within each of their approved training locations. They are tasked with activities central to assuring the quality of medical education such as writing the curriculum and assessment systems, reviewing applications for new posts and programmes, provision of external advisors to deaneries and recommending trainees eligible for CCT or Certificate of Eligibility for Specialist Registration (CESR).

JRCPTB uses data from six quality datasets across its specialties and subspecialties to provide meaningful quality management. The datasets include the GMC national Training Survey (NTS) data, ARCP outcomes, examination outcomes, new consultant survey, external advisor reports and the monitoring visit reports.

Quality criteria have been developed to drive up the quality of training environments and ultimately improve patient safety and experience. These are monitored and reviewed by JRCPTB to improve the provision of training and ensure enhanced educational experiences.

8   Intended use of curriculum by trainers and trainees

This curriculum and ARCP decision aid are available from the Joint Royal Colleges of Physicians Training Board (JRCPTB) via the website (www.jrcptb.org.uk).

Clinical and educational supervisors should use the curriculum and decision aid as the basis of their discussion with trainees, particularly during the appraisal process. Both trainers and trainees are expected to have a good knowledge of the curriculum and should use it as a guide for their training programme.

Each trainee will engage with the curriculum by maintaining an eportfolio. The trainee will use the curriculum to develop learning objectives and reflect on learning experiences.

Recording progress in the eportfolio

On enrolling with JRCPTB trainees will be given access to the eportfolio. The eportfolio allows evidence to be built up to inform decisions on a trainee's progress and provides tools to support trainees' education and development.

The trainee's main responsibilities are to ensure the eportfolio is kept up to date, arrange assessments and ensure they are recorded, prepare drafts of appraisal forms, maintain their personal development plan, record their reflections on learning and record their progress through the curriculum.

The supervisor's main responsibilities are to use eportfolio evidence such as outcomes of assessments, reflections and personal development plans to inform appraisal meetings. They are also expected to update the trainee's record of progress through the curriculum, write end-of-attachment appraisals and supervisor's reports.

Deaneries, training programme directors, college tutors and ARCP panels may use the eportfolio to monitor the progress of trainees for whom they are responsible.

JRCPTB will use summarised, anonymous eportfolio data to support its work in quality assurance.

All appraisal meetings, personal development plans and workplace based assessments (including MSF) should be recorded in the eportfolio. Trainees are encouraged to reflect on their learning experiences and to record these in the eportfolio. Reflections can be kept private or shared with supervisors.

Reflections, assessments and other eportfolio content should be used to provide evidence towards acquisition of curriculum capabilities. Trainees should add their own self-assessment ratings to record their view of their progress. The aims of the self-assessment are:
- to provide the means for reflection and evaluation of current practice
- to inform discussions with supervisors to help both gain insight and assists in developing personal development plans.
- to identify shortcomings between experience, competency and areas defined in the curriculum so as to guide future clinical exposure and learning.

Supervisors can sign-off and comment on curriculum capabilities to build up a picture of progression and to inform ARCP panels.

9   Equality and diversity

The Royal Colleges of Physicians will comply, and ensure compliance, with the requirements of equality and diversity legislation set out in the Equality Act 2010.

The Federation of the Royal Colleges of Physicians believes that equality of opportunity is fundamental to the many and varied ways in which individuals become involved with the Colleges, either as members of staff and Officers; as advisers from the medical profession; as members of the Colleges' professional bodies or as doctors in training and examination candidates.

Deaneries quality assurance will ensure that each training programme complies with the equality and diversity standards in postgraduate medical training as set by GMC. They should provide access to a professional support unit or equivalent for trainees requiring additional support.

Compliance with anti-discriminatory practice will be assured through:

- Monitoring of recruitment processes.
- Ensuring all College representatives and Programme Directors have attended appropriate training sessions prior to appointment or within 12 months of taking up post.
- Deaneries ensuring that educational supervisors have had equality and diversity training (for example, an e-learning module) every three years.
- Deaneries ensuring that any specialist participating in trainee interview/appointments committees or processes has had equality and diversity training (at least as an e-module) every three years.
- Ensuring trainees have an appropriate, confidential and supportive route to report examples of inappropriate behaviour of a discriminatory nature. Deaneries and Programme Directors must ensure that on appointment trainees are made aware of the route in which inappropriate or discriminatory behaviour can be reported and supplied with contact names and numbers. Deaneries must also ensure contingency mechanisms are in place if trainees feel unhappy with the response or uncomfortable with the contact individual.
- Providing resources to trainees needing support (for example, through the provision of a professional support unit or equivalent).
- Monitoring of College Examinations.
- Ensuring all assessments discriminate on objective and appropriate criteria and do not unfairly advantage or disadvantage a trainee with any of the Equality Act 2010 protected characteristics. All efforts shall be made to ensure the participation of people with a disability in training through reasonable adjustments.

JRCPTB

Joint Royal Colleges of Physicians Training Board